

IN THE CLAIMS

Please amend the claims as follows:

1- 32. (Cancelled)

33. (Currently Amended): A substrate processing apparatus comprising:

a processing vessel forming a processing space;

a rotatable supporting table for supporting a substrate to be processed in the processing space, the substrate having a surface to be processed;

a first remote radical generation unit, provided at a first sidewall portion of the processing vessel, for forming first radicals by a high frequency plasma and supplying the first radicals into the processing space through a first gas outlet provides at the first sidewall portion;

a second remote radical generation unit, provided at the first sidewall portion of the processing vessel, for forming second radicals by a high frequency plasma and supplying the second radicals into the processing space through a second gas outlet provides at the first sidewall portion;

a gas exhaust port, provided at a second sidewall portion of the processing vessel, to exhaust the processing space, the second sidewall portion being disposed opposite to the first sidewall portion with the supporting table placed therebetween,

wherein ~~the first and the second radical generation unit and the gas exhaust port are provided at the processing vessel, such that~~ the first and the second radicals are respectively introduced into the processing space from the first and the second gas outlets sidewall portion ~~toward the second sidewall portion~~ along a first flow path and a second flow path which are substantially parallel to the surface of the substrate mounted on the supporting table, and

a flow adjusting plate ~~interfering with the first flow path to change a flow direction thereof, the first radicals flowing into the processing space along the first flow path whose~~

flow direction has been changed provided in the vicinity of the first gas outlet and configured to change a direction of the first flow path by an angle θ to thereby direct the first radicals introduced from the first gas outlet along the first flow path whose flow direction has been changed.

34. (Currently Amended): The substrate processing apparatus of claim 33, wherein the first remote radical generation unit is a nitrogen radical generation unit and the second remote radical generation unit is a oxygen radical generation unit.

35. (Currently Amended): The substrate processing apparatus of claim 34, wherein the nitrogen radical generation unit includes a first gas passageway and a first high frequency plasma generation unit formed at a part of the first gas passageway to excite a nitrogen gas passing therethrough into a plasma; and the oxygen radical generation unit includes a second gas passageway and a second high frequency plasma generation unit formed at a part of the second gas passageway to excite an oxygen gas passing therethrough into a plasma,

wherein the first and the second gas passageway are in communication with the processing space through the first and second gas outlets, respectively.

36-37. (Cancelled)

38. (Currently Amended): The substrate processing apparatus of claim 33, wherein the distance between a center line of the second flow path and ~~that~~ a center of the substrate mounted on the supporting table is 40mm or less.

39. (Currently Amended): The substrate processing apparatus of claim 33, wherein a center line of the first flow path whose flow direction has been changed intersects with that of

the second flow path substantially ~~[[at]]~~ directly above a center of the substrate mounted on the supporting table.

40. (Cancelled).

41. (Currently Amended): A substrate processing apparatus comprising:

- a processing vessel forming a processing space;
- a rotatable supporting table for supporting a substrate to be processed in the processing space, the substrate having a surface to be processed;
- a first remote radical generation unit, provided at a first sidewall portion of the processing vessel, for forming first radicals by a high frequency plasma and supplying the first radicals into the processing space through a first gas outlet provided at the first sidewall portion;
- a second remote radical generation unit, provided at the first sidewall portion of the processing vessel, for forming second radicals by a high frequency plasma and supplying the second radicals into the processing space through a second gas outlet provided at the first sidewall portion;
- a gas exhaust port, provided at a second sidewall portion of the processing vessel, to exhaust the processing space, the second sidewall portion being disposed opposite to the first sidewall portion with the supporting table placed therebetween,

wherein ~~the first and the second radical generation unit and the gas exhaust port are provided at the processing vessel, such that~~ the first and the second radicals are respectively introduced into the processing space from the first and the second gas outlet sidewall portion ~~toward the second sidewall portion~~ along a first flow path and a second flow path which are substantially parallel to the surface of the substrate mounted on the supporting table, the

second flow path being directed toward a center of the substrate when viewed from above the surface of the substrate, and

a flow adjusting plate interfering with the first flow path to supply the first radicals towards a center of the substrate mounted on the supporting table, provided in the vicinity of the first gas outlet and configured to change a direction of the first flow path by an angle θ to thereby direct the first radicals introduced from the first gas outlet along the first flow path whose flow direction has been changed.

42-45. (Cancelled)

46. (Currently Amended): The substrate processing apparatus of claim 33, wherein the first remote radical generation unit is a oxygen radical generation unit and the second remote radical generation unit is a nitrogen radical generation unit.

47. (Currently Amended): The substrate processing apparatus of claim 46, wherein the oxygen radical generation unit includes a first gas passageway and a first high frequency plasma generation unit formed at a part of the first gas passageway to excite a oxygen gas passing therethrough into a plasma; and the nitrogen radical generation unit includes a second gas passageway and a second high frequency plasma generation unit formed at a part of the second gas passageway to excite an nitrogen gas passing therethrough into a plasma, wherein the first and the second gas passageway are in communication with the processing space through the first and second gas outlets, respectively.

48. (Currently Amended): The substrate processing apparatus of claim 41, wherein the first remote radical generation unit is a nitrogen radical generation unit and the second remote radical generation unit is a oxygen radical generation unit.

49. (Currently Amended): The substrate processing apparatus of claim 48, wherein the nitrogen radical generation unit includes a first gas passageway and a first high frequency plasma generation unit formed at a part of the first gas passageway to excite a nitrogen gas passing therethrough into a plasma; and the oxygen radical generation unit includes a second gas passageway and a second high frequency plasma generation unit formed at a part of the second gas passageway to excite an oxygen gas passing therethrough into a plasma, wherein the first and the second gas passageway are in communication with the processing space through the first and second gas outlets, respectively.

50. (Currently Amended): The substrate processing apparatus of claim 41, wherein a center line of the first flow path whose flow direction has been changed intersects with that of the second flow path substantially at the center of the substrate mounted on the supporting table when viewed from above the surface of the substrate.

51. (Currently Amended): The substrate processing apparatus of claim 41, wherein the first radicals and the second radicals are respectively introduced into the processing vessel space while flowing substantially parallel to the surface of the substrate mounted on the supporting table.

52. (Currently Amended): The substrate processing apparatus of claim 41, wherein the first remote radical generation unit is a oxygen radical generation unit and the second remote radical generation unit is a nitrogen radical generation unit.

53. (Currently Amended): The substrate processing apparatus of claim 52, wherein the oxygen radical generation unit includes a first gas passageway and a first high frequency

plasma generation unit formed at a part of the first gas passageway to excite a oxygen gas passing therethrough into a plasma; and the nitrogen radical generation unit includes a second gas passageway and a second high frequency plasma generation unit formed at a part of the second gas passageway to excite an nitrogen gas passing therethrough into a plasma,

wherein the first and the second gas passageway are in communication with the processing space through the first and second gas outlets, respectively.

54. (New): The substrate processing apparatus of claim 33, wherein the first flow path whose flow direction has been changed and the second flow path are directed toward the substrate mounted on the supporting table.

55. (New): The substrate processing apparatus of claim 41, wherein the first flow path whose flow direction has been changed is directed toward the substrate mounted on the supporting table.